

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 March 2006 (30.03.2006)

PCT

(10) International Publication Number
WO 2006/033664 A1

(51) International Patent Classification:
C12Q 1/68 (2006.01) *C07H 21/04* (2006.01)

(21) International Application Number:
PCT/US2005/007748

(22) International Filing Date: 8 March 2005 (08.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/550,304 8 March 2004 (08.03.2004) US

(71) Applicant (for all designated States except US): AVALON
PHARMACEUTICALS [US/US]; 20358 Seneca Mead-
ows Parkway, Germantown, MD 20876 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): STROVEL, Jeffrey,
W. [US/US]; 14622 Keeneland Circle, North Potomac,
MD 20878 (US). CAIN, Colyn, B. [US/US]; 4309 Kent-
bury Drive, Bethesda, MD 20814 (US). HARRIGAN,
Stephen, K. [US/US]; 1895 Millboro Drive, Potomac,
MD 20854 (US). AUGUSTUS, Meena [US/US]; 3215
Hollyhock Drive, Burtonsville, MD 20866 (US).

(74) Agents: GRANT, Alan, J. et al.; Carella, Byrne, Bain,
Gillfillan, Cecchi, Stewart & Olstein, 5 Becker Farm Road,
Roseland, NJ 07068 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

— with international search report
— with sequence listing part of description published sepa-
rately in electronic form and available upon request from
the International Bureau

(48) Date of publication of this corrected version:

29 June 2006

(15) Information about Correction:

see PCT Gazette No. 26/2006 of 29 June 2006

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: DETERMINING CANCER-LINKED GENES AND THERAPEUTIC TARGETS USING MOLECULAR CYTOGE-
NETIC METHODS

(57) Abstract: Methods for identifying antineoplastic agents by using their ability to modify expression of specific genes or the
biological activity of polypeptides encoded by such genes, wherein said genes are located in specific chromosomal regions, called
amplicons, or regions of interest, and the presence of such amplified regions within a cancerous cell, are disclosed. Also described
are methods for diagnosing cancerous, or potentially cancerous, conditions using these methods. Also encompassed are methods
involving determining the modulated expression of the genes in these regions of interest (ROIs), or amplicons, as pharmacody-
namic/pharmacogenetic/surrogate markers and/or for patient profiling prior to accrual for clinical trials/treatments based on the
identification of these genes as validated gene/drug targets in various cancer tissue types.

WO 2006/033664 A1